

ABSTRACT OF THE DISCLOSURE

A process and system for enhanced storage of trajectories
5 reduces storage requirements over conventional methods and
systems. A video content analysis module automatically
identifies objects in a video frame, and determines the (x_i, y_i)
coordinates of each object i . The reference coordinates for each
for object i , (x_{ref_i}, y_{ref_i}) are set to (x_i, y_i) when the object is
10 first identified. For subsequent frames, if the new coordinates
 (x_{new_i}, y_{new_i}) are less than a given distance from the reference
coordinates, that is if $\| (x_{new_i}, y_{new_i}) - (x_{ref_i}, y_{ref_i}) \|^2 < \epsilon$,
then the current coordinates are ignored. However, if the
object moves more than the distance ϵ , the current coordinates
15 (x_{new_i}, y_{new_i}) are stored in the object's trajectory list, and we
set the reference coordinates (x_{ref_i}, y_{ref_i}) to the object's
current position. This process is repeated for all subsequent
video frames. The resulting compact trajectory lists can then
be written to memory or disk while they are being generated, or
20 when they are complete.